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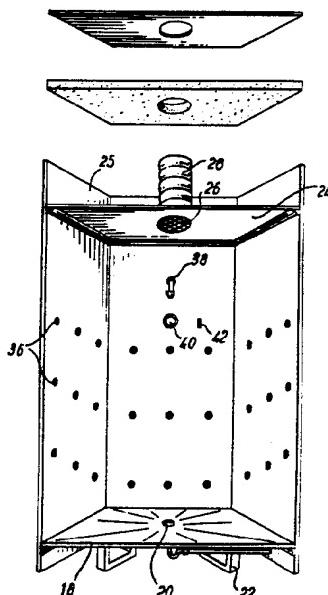
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(54) Shower apparatus with drying means

(57) Shower apparatus includes a cabinet and a water spray nozzle (38) connected to a pump. A plurality of vents (36) are provided in the walls of the cabinet connected via ducting to fans for provision of jets of air for drying a person after showering, the vents being closable and directionally adjustable. A one-way vent (26) is provided in the cabinet ceiling (24) to allow exhaustion of air therefrom. The cabinet is constructed such that the streams of air through the vents create above ambient pressure in the cabinet to provide automatic exhaustion through the vent.



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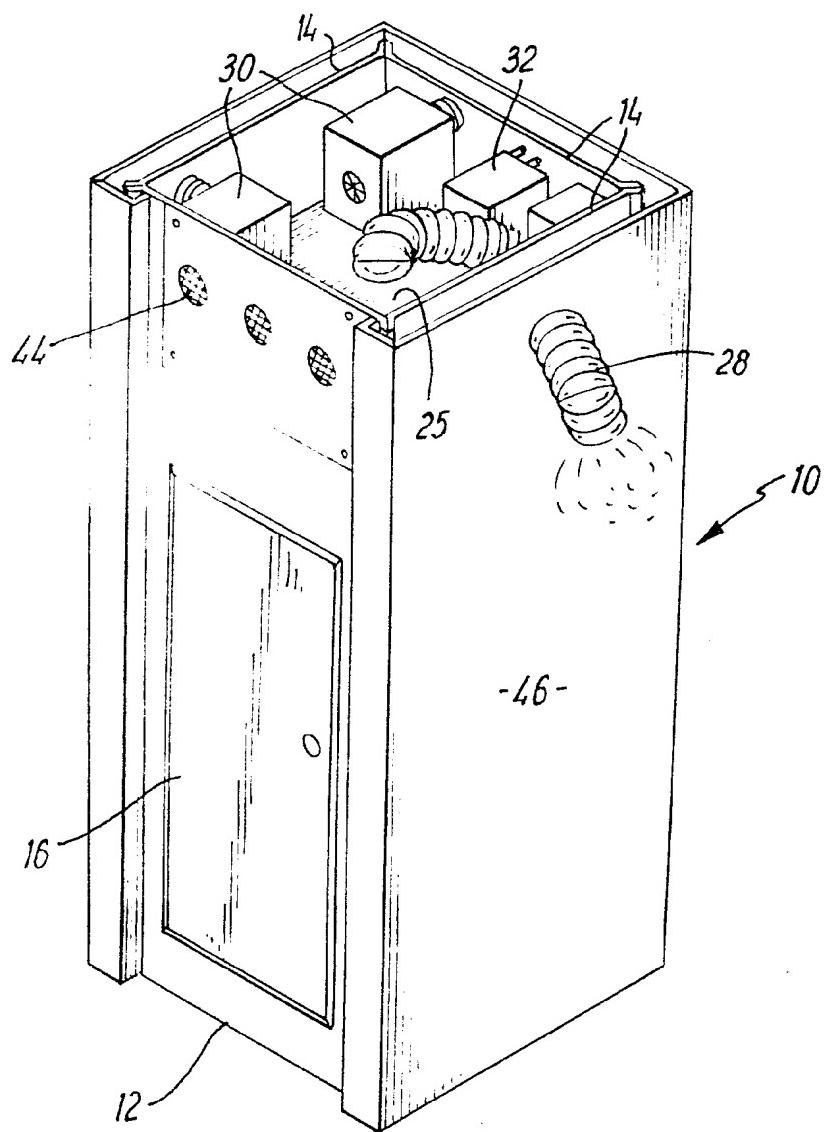
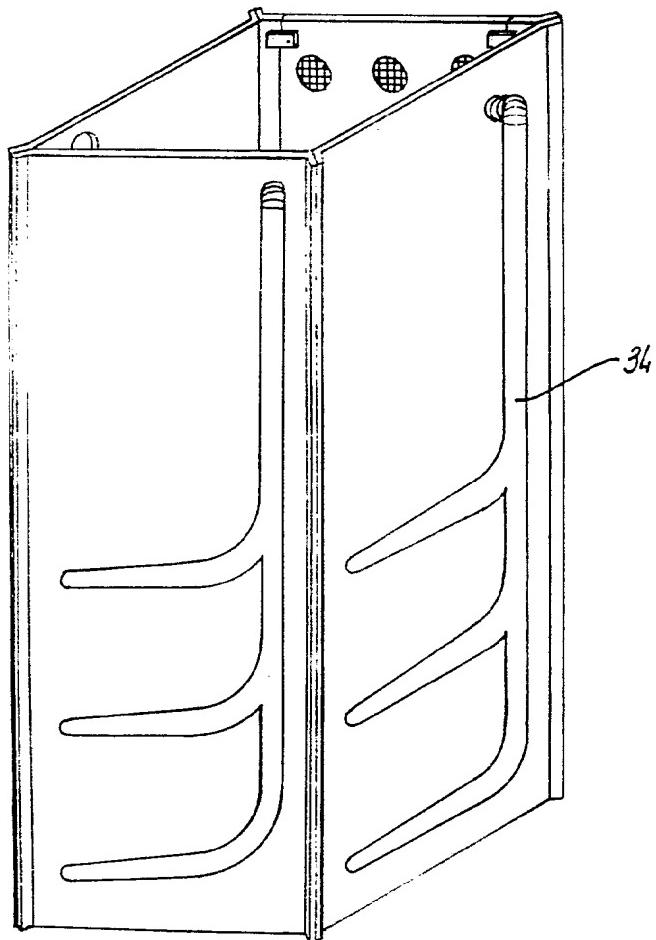


Fig 1

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FIG/2

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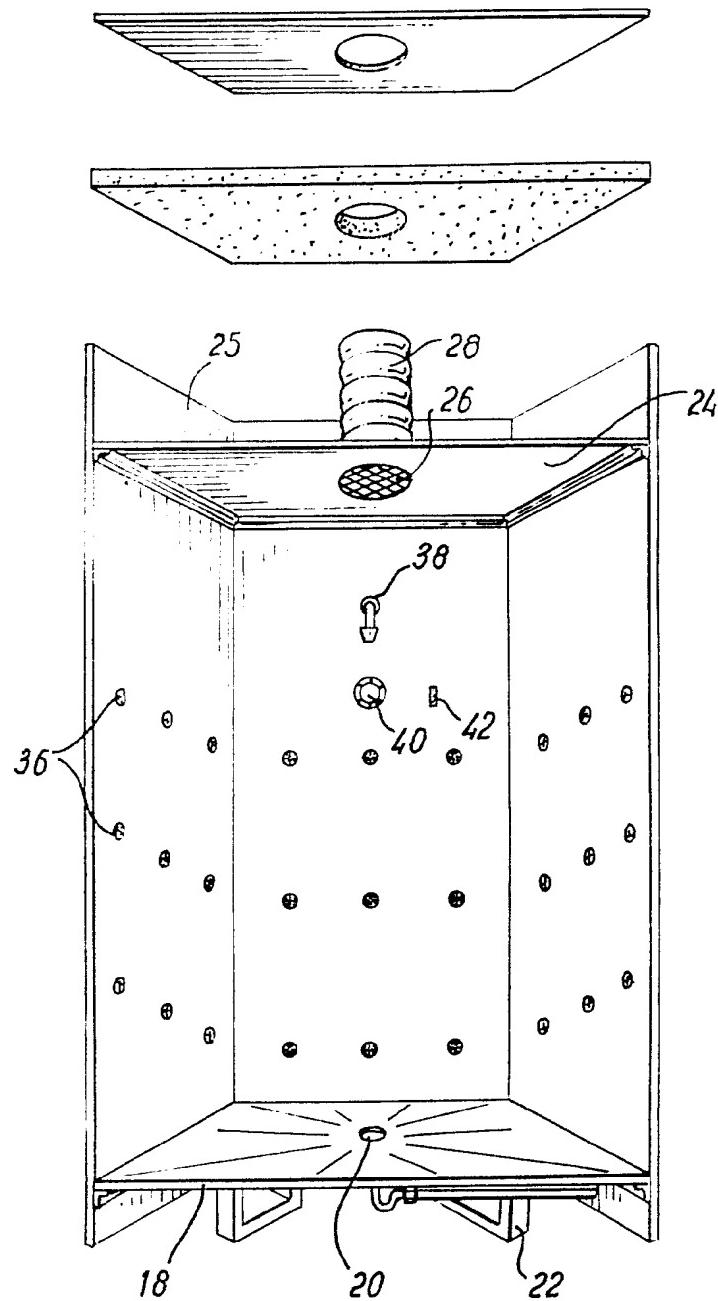


FIG. 3

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Improvements in or relating to Shower Apparatus

This invention concerns improvements in or relating to shower apparatus.

After taking a shower a person has to dry themselves. Conventionally towels are used for this purpose, and the towels themselves have to be subsequently dried and regularly washed. In places such as hotels this can entail a considerable laundry bill. Further in work places where showering is essential, for example asbestos and nuclear contaminated areas, such towels may have to be disposed off.

According to the present invention there is provided shower apparatus comprising a shower cabinet including an exhaust outlet, and drying means for adjustably directing a plurality of streams of air into the cabinet, the cabinet being constructed such that the streams of air create above ambient pressure in the cabinet to provide automatic exhaustion through the outlet.

Preferably means are provided for preventing the water shower and drying means from operating simultaneously.

The drying means may include means for heating the

stream of air and means may be provided for adding a substance to the stream of air such as perfume.

The drying means preferably comprises a fan connected by ducting to a plurality of vents in the cabinet walls.

The cabinet preferably comprises four walls in one of which is provided a substantially sealingly closable door. The vents are preferably provided in the other three walls and the alignment and opening of the vents is preferably adjustable.

A plurality of fans are desirably provided, preferably one for each of the three walls including vents.

The fans may be located in an upper part of the cabinets sealed from the interior thereof.

The exhaust outlet preferably comprises a vent which is preferably one way, located in an upper part of the cabinet connected to the atmosphere.

A plurality of water spray heads may be provided in the cabinet.

Timing means may be provided such that the drying means operates for a predetermined minimum length of time.

The drying means may be operable by touch sensitive controls accessible from within the cabinet.

The means for heating the stream of air may comprise an electrically operated thermostatically controlled heater.

Part or all of the apparatus may be coin operated.

An embodiment of the present invention will now be described by way of example with reference to the accompanying drawings in which:-

Fig 1 is a front perspective view of apparatus according to the invention;

Fig 2 is a back perspective view of part of the apparatus of Fig 1; and

Fig 3 is a diagrammatic front view of part of the apparatus of Fig 1

The drawings show a shower apparatus including a cabinet 10. The cabinet 10 has four sealingly connected side walls 12, 14, 14, 14. The side wall 12 includes a sealingly closable door 16 extending for a substantial part of the wall's height. A lock (not shown) operable from within the cabinet is provided on the door 16 and a security device is provided to permit unlocking from outside the cabinet 10 in an emergency. A floor 18 is provided in the cabinet spaced a short distance from the bottom of the walls 12, 14. The floor 18 gently slopes to a central drain 20 connectable to a foul water drain. Ground engaging feet 22 are provided to support the floor 18.

A ceiling 24 is provided in the cabinet 10 spaced from the top of the walls 12, 14 defining a chamber 25 thereabove. A one way vent 26 is provided in the ceiling 24 and connects with the atmosphere via a flexible pipe 28.

Located within the chamber 25 are three fans 30 including air heaters, and a conventional shower pump and water heater 32. The air heaters are thermostatically controlled. Each of the fans 30 connects via ducting 34 to a respective set of nine air vents provided in each of the walls 14. The ducting 34 includes three branches,

each branch connecting to one of a line of three vents 36. The ducting 34 narrows away from the fans 30 to provide a substantially constant air pressure therein. The vents 36 are closable and directionally adjustable so air can be directed onto the required parts of a persons body.

Pipework leads from the pump 32 to a spray nozzle 38 in the cabinet. A rotary control 40 is provided for the pump 32, and a touch sensitive switch 42 is provided for the fans 30. The control 40 and switch 42 are so connected that the fans 30 and pumps 32 cannot be simultaneously operated.

Vents 44 leading into the chamber 25 are provided in the wall 12. Decorative outer panels 46 are provided on the outside of the walls 14. The panels can obviously be shaped and decorated as required. The switch 42 is connected to a timing circuit such that the fans 30 operate for a predetermined minimum lenght of time to dry the cabinet 10.

There is thus described shower apparatus which in addition to showering provides for the drying of a person. The arrangement of the vents and the automatic venting due to the raised pressure in the cabinet

provides for rapid drying which can be directed to the required areas. The apparatus can be relatively inexpensively constructed and can save the often considerable cost of providing a clean towel.

Various modifications may be made without departing from the scope of the invention. For example the cabinet may be differently constructed. More than one shower head could be provided in the cabinet. Means could be provided to permit substances to be added to the air being blown into the cabinet and the substances may include perfume. This shower apparatus readily lends itself to be used in public places and the shower and/or drying apparatus could be coin operated. A filter, which may be replacable may be locatable across the exhaust outlet. This would be especially important when used with asbestos or in nuclear contaminated areas.

Whilst endeavouring in the foregoing specification to draw attention to those features of the invention believed to be of particular importance it should be understood that the Applicant claims protection in respect of any patentable feature or combination of features hereinbefore referred to and/or shown in the drawings whether or not particular emphasis has been placed thereon.

Claims

1. Shower apparatus comprising a shower cabinet including an exhaust outlet, and drying means for adjustably directing a plurality of streams of air into the cabinet, the cabinet being constructed such that the streams of air create above ambient pressure in the cabinet to provide automatic exhaustion through the outlet.
2. Apparatus according to claim 1, in which means are provided for preventing the water shower and drying means from operating simultaneously.
3. Apparatus according to claim 1 or claim 2, in which the drying means includes means for heating the streams of air.
4. Apparatus according to any of claims 1 to 3, in which means is provided for adding a substance to the streams of air.
5. Apparatus according to claim 4, in which the substance is perfume.

6. Apparatus according to any of the preceding claims, in which the cabinet comprises four walls in one of which is provided a substantially sealingly closable door.

7. Apparatus according to any of the preceding claims, in which the drying means comprises a fan connected by ducting to a plurality of vents in the cabinet walls.

8. Apparatus according to claim 7 when dependent on claim 6, in which the vents are provided in the other three walls.

9. Apparatus according to claim 7 or claim 8, in which the alignment and opening of the vents is adjustable.

10. Apparatus according to any of claims 7 to 9, in which a plurality of fans are provided.

11. Apparatus according to claim 10 when dependent on claim 8, in which a fan is provided for each of the three walls including vents.

12. Apparatus according to claim 10 or 11, in which the fans are located in an upper part of the cabinet sealed from the interior thereof.

13. Apparatus according to any of the preceding claims, in which the exhaust outlet comprises a vent located in an upper part of the cabinet and connected to the atmosphere.

14. Apparatus according to claim 13, in which the vent is one way.

15. Apparatus according to any of the preceding claims, in which a plurality of water spray heads are provided in the cabinet.

16. Apparatus according to any of the preceding claims, in which timing means is provided such that the drying means operates for a predetermined minimum length of time.

17. Apparatus according to any of the preceding claims, in which the drying means is operable by touch sensitive controls accessible from within the cabinet.

18. Apparatus according to any of the preceding claims, in which the apparatus is coin operated.

19. Apparatus according to any of claims 4 to 18 when dependent on claim 3, in which the means for heating the stream of air comprises an electrically operated thermostatically controlled heater.

20. Shower apparatus substantially as hereinbefore described with reference to the accompanying drawings.

21. Any novel subject matter or combination including novel subject matter herein disclosed in the foregoing specification or claims and/or shown in the drawings, whether or not within the scope of or relating to the same invention as any of the preceding claims.